

REMARKS

Claims 1 and 3-40 are all the claims presently pending in the application. Claim 13 is amended to more clearly define the invention. Claim 2 is canceled. Entry of this Amendment is proper under 37 CFR §1.116, since no new issues are being presented to the Examiner which would require further consideration and/or search.

These amendments are made only to more particularly point out the invention for the Examiner and not for narrowing the scope of the claims or for any reason related to a statutory requirement for patentability.

Applicants also note that, notwithstanding any claim amendments herein or later during prosecution, Applicants' intent is to encompass equivalents of all claim elements.

Claims 13-20 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter.

Claims 1 and 3-40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Burke, et al. (U.S. Patent No. 6,789,252) in view of Sheard, et al. (U.S. Patent No. 6,208,345), and further in view of Kompella. (U.S. Patent No. 7,350,191 B1).

This rejection is respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

An exemplary embodiment of the claimed invention, as recited by, for example, independent claim 1, is directed to a method of discovering a business object definition that includes receiving an object and a collaboration code, and determining a business object definition for the object based upon the collaboration code. The collaboration code determines the business object definition for the object without pre-defined business object definitions, if the object does not conform to a known business object definition.

Conventional systems and methods may include object discovery agents that produce business object definitions that include mapping information between object attributes and data fields in the application data sources. However, these methods and systems must subscribe in advance to the pre-defined business object definitions, and can only exchange business objects of the business object definitions. Changes in business object definitions often render these conventional systems and methods useless. Further, these systems and methods often need to subscribe to a very large number of business object definitions. (See

Application from page 2, lines 15-25 to page 3, lines 1-20).

In contrast, the present invention is capable of dynamically determining a business object definition for an object based upon the collaboration code, without need to include pre-defined business object definitions. (See Application at page 6, lines 15-22). Thus, the present invention is capable of reverse engineering the composition of a business object to dynamically discover a business object definition, thereby obviating the above-described problems.

II. THE 35 U.S.C. § 101 REJECTION

The Examiner maintains that claims 13-20 are directed to non-statutory subject matter. Claims 13 and 20 have been amended, above, to overcome this rejection, as best understood from the latest standard defined in the recent *Bilski* holding.

In view of the above, reconsideration and withdrawal of the rejection is respectfully requested.

III. THE PRIOR ART REJECTION

The Examiner alleges that the Burke, when combined with Sheard and Kompella, renders obvious claims 1 and 3-40. Applicants submit, however, that there are elements of the claimed invention which are neither taught nor suggested by Burke or Sheard or tertiary reference Kompella.

The approach of the present invention involves reverse engineering to examine how a business object is composed (*e.g.*, by viewing the collaboration code or business logic that composes the object). Burke's approach proposes a dynamic business object definition (BOD) system that includes merging BODs, or combines use-defined BOD. But, there is no reverse engineering involved in Burke's approach. Rather, their BOD creation may be simple attribute-by-attribute creation from a business object, and it does not involve reversing any business logic to create such BODs. That is, the BOD creation of Burke may be dynamic, but it only merges known or existing BODs.

Moreover, secondary reference Sheard fails to overcome this fundamental deficiency of primary reference Burke. Sheard's method is not about dynamically discovering collaboration code at runtime. Rather, it merely concerns delivery of business rules. These business rules are not collaboration code. In fact, these rules rely on user-provided

information, as can be seen from the description beginning at lines 24-36 of column 31.

For example, the description beginning at line 24 is: “*Each time an adapter is deployed, a set of meta definition file is supplied.*” Lines 31-34 confirm this aspect of Sheard: “*It is noted that ... and internal field mappings must be supplied by the adapter developer.*” Also, although lines 28-31 of column 14 mention the “... *customer-specific business rules received from the rules modules ...*”, these business rules are static rules, not the business object definitions that are dynamically-discovered by reverse-engineering using collaboration code, as is defined by the claimed invention.

Hence, turning to the clear language of the claims, in Burke there is no teaching or suggestion of: “... receiving an object and a collaboration code; determining a business object definition for said object based upon said collaboration code”, as required by independent claim 1.

Moreover, claim 1 further recites, inter-alia:

“wherein said collaboration code determines said business object definition for said object without pre-defined business object definitions, if the object does not conform to a known business object definition.”

Claims 13, 20, 25, and 33 recite similar claim features.

Moreover, relative to tertiary reference Kompella, as conceded by the Examiner, neither Burke nor Shear teach or suggest, “wherein said collaboration code determines said business object definition for said object without pre-defined business object definitions, if the object does not conform to a known business object definition.” (Office Action, page 4, lines 5-8). However, Applicants submit that Kompella also fails to remedy Burke’s and Sheard’s deficiencies.

Applicant points out that “[w]hen a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied upon must be designated as nearly as practicable” (see M.P.E.P. § 707; 37 C.F.R. § 1.104). Indeed, “the particular figure(s) of the drawing(s), and/or page(s) or paragraph(s) of the reference(s), and/or any relevant comments briefly stated should be included” (see M.P.E.P. § 707).

Here, in relying exclusively on column 31-32, lines 59 and 1-21 of Kompella, (Office Action, pages 16-17, paragraph 7, the Examiner merely block-copied the cited section of Kompella without identifying which features of the applied reference teaches or suggests the

claimed, “*collaboration code*,” “*predefined business object definitions*,” “*object*,” or “*wherein said collaboration code determines said business object definition for said object without pre-defined business object definitions*,” on the condition, “*if the object does not conform to a known business object definition*.” Nor does the rejection of record explain how the cited section of Kompella, when read as a whole, teaches or suggests, “*wherein said collaboration code determines said business object definition for said object without pre-defined business object definitions, if the object does not conform to a known business object definition*.”

In analyzing the Kompella reference for the Examiner’s benefit, Applicants again point out that Kompella merely teaches that in an upgrade protection process (268),..., renames the data objects in a new run to match their names in a previous run when it can be determined they are the same data objects by their relationships to the source application screens from which they originated, and the meta data descriptions of the records returned by the data objects, (Column 31, line 65-column 32, line 7), in direct contrast to the requirements of the claimed invention that “*wherein said collaboration code determines said business object definition for said object without pre-defined business object definitions*,” under the condition, “*if the object does not conform to a known business object definition*.”

While Kompella teaches that an upgrade protection process may determine the best compatible but differently named metadata definition of the data objects (Column 32, lines 8-10), the Examiner appears to confuse Kompella’s meta data as being the business object definition of the claimed invention. That is, merely determining a metadata definition is not the same as, and does not teach or suggest, “*wherein said collaboration code determines said business object definition for said object without pre-defined business object definitions*,” under the condition, “*if the object does not conform to a known business object definition*.”

Applicants note that the Examiner has not even alleged, or explain why “metadata definition” may be read as the “*business object definition*”, or the “*known business object definition*” of the claimed invention.

Since the Examiner has not explained which features of Kompella teaches or suggests each element of the claimed invention, and has not established that Kompella’s meta-data definition may be read upon as the elements of the claimed invention, the Examiner has failed to meet his burden to prove that Kompella meets to plain-meaning of the claim language.

Assuming, *arguendo*, that Kompella does remedy the deficiencies of Burke and Sheard, *In re Kahn* states that, “Rejection based on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F. 3d 977, 988. Also, the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1395-97 (2007) identified a number of rationales to support a conclusion of obviousness which are consistent with the proper “functional approach” to the determination of obviousness as laid down in *Graham*. The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.

Exemplary rationales that may support a conclusion of obviousness include:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) “Obvious to try” – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. (See MPEP 2143).

Here, in repeating the rationale of record, (Office Action, page 4, lines 8-11) the Examiner still has not clearly articulated why one of ordinary skill in the art would even consider combining Kompella with Sheard or Burke. Indeed, the Examiner merely made a conclusory statement that Kompella teaches that previous methods were “too costly and too time consuming” without pointing out that Kompella indeed refers in any meaningful way to the methods and systems of Sheard or Burke as being an example of “the conventional system” that makes it “a very time consuming, manual process to learn the data structures, hone the required skills and write the queries, reports, or routines to extract the data and make it meaningful to a business user. (Kompella column 1, lines 30-45).

In fact, Kompella is not even relevant to Burke or Sheard. That is, Kompella is not

concerned about discovering a business object definition, as in Burke, or concerned about visual data integration, as in Sheard. Instead, Kompella only teaches a method and architecture that discovers software-application metadata and generates data access applications based on the discovered metadata. (Abstract). That is, although Kompella's approach might be adaptable to dynamically recreate a business object with metadata, it assumes that there are data objects from a "previous run" with the same/similar metadata, to be compared with. For objects of different metadata, Kompella's method will "rename" the attributes to make the objects best compatible with existing metadata.

In contrast, the present invention does not require the same or similar existing business objects. Moreover, the business objects of the present invention embed collaboration code in the business objects, which aspect of the present invention is not satisfied by and cannot be easily provided by simply "renaming" attributes. Thus, there are features of the present invention that are major differences from Kompella.

Therefore, one of ordinary skill in the art would not have even considered Kompella when seeking to remedy Burke's or Sheard's deficiencies, or considered combining Kompella with Burke or Sheard.

Also, since Kompella is directed to subject matters different from Burke and Sheard, and the Examiner has not reconciled the differences amongst the references, the Examiner has not established the Examiner's initial burden to demonstrate that substituting or improving Burke's or Sheard's teachings with Kompella's device would yield predicable results.

Finally, as discussed above, even if Kompella were to be combined as urged by the Examiner, the result would not provide the claimed invention.

Since there are features of the claims that are neither taught nor suggested by the above-cited references, reconsideration and withdrawal of the rejections is respectfully requested.

IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 1 and 3-40, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,

Date: February 27, 2009

A handwritten signature in black ink, appearing to read 'Jeoyuh Lin', is written over a horizontal line.

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